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Physical Demands Analysis

Journeyman Bricklayer

Prepared for:
 Alberta Construction Association

Job Title:	Bricklayer	Assessment Location:	Edmonton, AB	Data Collection Date:	October 27, 2020
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Completed By:	Joanna Taets Von Amerongen, BKin	Submitted on:	January 29, 2021
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Disclaimer:	The Physical Demands noted in this report may vary depending on company and location. Please contact the company directly to confirm this physical demands analysis is an accurate representation of the specific job title for the specific location.
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Work Schedule:	<p>Shift Duration: 5 days/week, 8 hours/day</p> <p>Break Schedule: Total of 1 hour break per day / 2-15 minute breaks, 1-30 minute break</p> <p>Shift Rotation: Not applicable</p> <p>On call is required: No</p> <p>Overtime required: No; but may be available depending on work volume and project deadlines</p>
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Education / Experience:	<p>Education required: 3 year apprenticeship program for Bricklayer Ticket</p> <p>Hours required for position: 1600 hours/year</p> <p>Tickets that may be required (not limited to): Fall protection, Elevated Work Platform (EWP), Forklift/Arial tickets, First Aid, WHMIS, Construction Safety Training Systems (CSTS) and Basic Safety Orientation (BSO).</p>
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Labour Provider:	N/A
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Job Overview:	As a Bricklayer the worker is required to prepare and install bricks onto new or existing buildings as outlined by the Bricklayer Foreman.		
	% of shift	Job Task	Task Description
	3-5%	Safety meeting	<ul style="list-style-type: none"> To discuss safety procedures on site including safety fall arrest, health procedures on site and identify hazards on site. Organize and delegating project tasks to each crew member and coordinating timelines for the crew.
	5-10%	Area check	<ul style="list-style-type: none"> Check for safe work practices on site including: proper lighting and footing, proper protection from outdoor elements are secured, heaters (if necessary), elevated work platforms are intact and secure, all equipment is secure and safely positioned. Completed after safety meeting, after each break and at the end of the shift.

	3-5%	Preparing work area	<ul style="list-style-type: none"> Retrieve required equipment, tools and materials for the outlined tasks provided by the Foreman. Labourers on site are provided to assist with retrieving and refilling materials (bricks, mud) as required. Fastening and bracing pins to ensure bricks are lined accurately.
	67-80%	Bricklaying	<ul style="list-style-type: none"> Installing and applying concrete to bricks onto designated areas (as defined by Foreman). Can lay up to 200 bricks within one shift.
	6-8%	Jointing	<ul style="list-style-type: none"> Create finished look on bricks laid by using the finishing tool. Completed as Bricklayer progresses through their tasks.
	3-5%	Clean up	<ul style="list-style-type: none"> Ensure all equipment, tools and materials are securely put away on site, work area is clean and free of hazards.] Completed with assistance from coworkers and labourers on site.

Equipment/ Tools:	<ul style="list-style-type: none"> Scaffolding materials (for elevated work areas) Hydromobile (for elevated work areas) Brick (8 lbs. each) Concrete (25 lbs.) Trowel (0.5 lbs.) 1 foot level (2 lbs.) Brush (0.5 lbs.) Flat joiner (0.5 lbs.) Raker (0.5 lbs.) Measuring tape Laser level Raker (0.5 lbs.) Shovel Drills Concrete pale (50 lbs.)
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Exposures / Environment:	<ul style="list-style-type: none"> Noise exposure Outdoor elements (cold, heat, wind, etc.) Dust (silica) Heights
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Personal Protective Equipment Required:	<ul style="list-style-type: none"> • Hard hat • Steel toed boots • Gloves • Safety glasses • Safety vest or high visibility stripes • Long sleeves and pants
Personal Protective Equipment as Required:	<ul style="list-style-type: none"> • Half mask respirator • Face shield (grinding/sawing) • Fall arrest • Hearing protection

NOC STRENGTH LEVEL KEY	
Strength Level	Definition
Limited (Lim)	Up to 5 kg (11 pounds)
Light (L)	5 kg to 10 kg (11 – 22 pounds)
Medium (M)	10 kg to 20 kg (22 – 44 pounds)
Heavy (H)	Greater than 20 kg (44 pounds plus)

**Strength Level Key based on the National Occupational Classification*

FREQUENCY KEY		
Frequency	% of Workday	Hours – Based on 8 hour Workday
Not Required (N/R)	0%	0
Rarely (R)	1 – 5%	<25 min/day
Occasionally (O)	6 – 33%	25 min to 2 hours 40 min/day
Frequently (F)	34 – 66%	2 hours 41 min to 5 hours 17 min/day
Constantly (C)	67 – 100%	5 hours 18 min to 8 hours/day

**Frequency Key based on WCB Alberta Recommendations*

Job Demand	Frequency / NOC Strength Level					Details/ Measurements
	N/R	R	O	F	C	
Material Handling:						
Floor to Waist Level Lifting			H*	Lim-H		Lifting equipment and tools including: drills, levels (2 lbs.), brushes (0.5 lbs.), flat joiner (0.5 lbs.), measuring tape, raker (0.5 lbs.) while bricklaying to and from work area on site. Lifting scaffolding material and planks during set up and take down on site. Lifting bricks, stones and pales of concrete on site to outlined position – as per Foreman’s instructions (frequency increases to frequent if labourers are not available).

Knee to Waist Level Lifting			H*	Lim-H	Lifting equipment and tools including: drills, levels (2 lbs.), brushes (0.5 lbs.), flat joiner (0.5 lbs.), measuring tape, raker (0.5 lbs.) while bricklaying, to and from work area on site. Lifting scaffolding material and planks during set up and take down on site. Lifting bricks, stones and pales of concrete on site to outlined position – as per Foreman’s instructions (frequency increases to frequent if labourers are not available).
Waist to Waist Level Lifting			H*	Lim-H	Lifting equipment and tools including: drills, levels (2 lbs.), brushes (0.5 lbs.), flat joiner (0.5 lbs.), measuring tape, raker (0.5 lbs.) while bricklaying, to and from work area on site. Lifting scaffolding material and planks during set up and take down on site. Lifting bricks, stones and pales of concrete on site to outlined position – as per Foreman’s instructions (frequency increases to frequent if labourers are not available).
Waist to Chest Level Lifting			H*	Lim-H	Lifting equipment and tools including: drills, levels (2 lbs.), brushes (0.5 lbs.), flat joiner (0.5 lbs.), measuring tape, raker (0.5 lbs.) while bricklaying, to and from work area on site. Lifting scaffolding material and planks during set up and take down on site. Lifting bricks, stones and pales of concrete on site to outlined position – as per Foreman’s instructions (frequency increases to frequent if labourers are not available).
Waist to Shoulder Level Lifting			H*	Lim	Lifting equipment and tools including: drills, levels (2 lbs.), brushes (0.5 lbs.), flat joiner (0.5 lbs.), measuring tape, raker (0.5 lbs.) while bricklaying, to and from work area on site. Lifting scaffolding material and planks during set up and take down on site. Lifting bricks, stones and pales of concrete on site to outlined position – as per Foreman’s instructions.
Waist to Overhead Level Lifting			H*		Lifting bricks, stones and pales of concrete on site to outlined position – as per Foreman’s instructions.
Front Carry			H*		Carrying materials including bricks, pales of concrete, scaffolding material and planks throughout the site.

Right / Left-handed Carry (Dominant Hand)			H*			Carrying materials including single bricks/stones, pales of concrete, scaffolding material, planks and various hand tools throughout the site.
Shoulder Carry		H*				Carrying planks or masonry blocks.
Static Pushing/Pulling (Force)		Light NOC Level				Pushing install onto wall.
Dynamic Pushing/Pulling (Force)		Heavy NOC Level		Light NOC Level		Moving material (bricks, concrete, etc.) within work area and when bricklaying, pushing manual power jack on site, pushing install on wall.

*For manual handling tasks above 50 lbs., it is recommended that the worker uses either a 2 person lift or assistive equipment (e.g. crane, forklift, etc.).

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Upper Extremity Work:						
Hand Gripping					X	Holding various hand tools (drills, trowel, brush, level, measuring tape, raker, etc.), bricks, pales of concrete, scaffolding material, etc. During work area preparation and clean up.
Pinch Gripping				X		Using level, while joints.
Upper Extremity Coordination					X	Using various hand tools (drills, trowel, brush, level, measuring tape, raker, etc.), bricks, pales of concrete, scaffolding material, etc. During work area preparation and clean up.
Reaching Forward				X		When laying concrete and brick, raking, brushing and jointing.
Overhead Shoulder Level Reaching			X			Working at higher levels (laying concrete, brick, raking, brushing), fastening and bracing pins.
Below Shoulder Level Reaching				X		Reaching lower levels for various hand tools (drills, trowel, brush, level, measuring tape, raker, etc.), laying bricks and concrete. During work area preparation and clean up.
Throwing	X					Not required

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Positional Work:						
Trunk Flexion (Bending)				X		While laying concrete and brick, brushing, raking and jointing at lower levels.

Trunk Rotation (Twisting)			X	X		While laying concrete and brick, brushing, raking and jointing at lower levels (depending on width of scaffolding material).
Kneeling			X			While raking (short distances).
Crawling		X				While raking (short distances).
Crouching			X			While raking (short distances), completing lay outs.
Squatting	X					Not required
Neck Flexion					X	Checking surroundings and work area/site for progress, safety hazards, while laying brick and jointing, lay outs, work area preparation and clean up.
Neck Extension			X			Checking surroundings and work area/site at higher levels for progress, safety hazards, while laying brick and jointing, lay outs at higher levels, work area preparation and clean up.
Neck Rotation			X			Checking surroundings and work area/site for progress, safety hazards, while laying brick and jointing, lay outs, work area preparation and clean up.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Static Work:						
Sitting		X				During breaks
Static Standing				X		While bricklaying, jointing, safety meeting.
Balancing				X		Balancing on scaffolding material, hydromobile and throughout site.

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Ambulation:						
Walking: Level Surfaces			X			On scaffolding material (short distances).
Walking: Uneven Surfaces			X			During work area preparation and clean up, retrieving equipment, tools and materials as needed, throughout site.
Walking: Slopes		X				Dependent on site.
Jumping	X					Not required.
Running	X					Not required.



Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Climbing:						
Stairs			X			Throughout site.
Ladder			X			Onto scaffolding, depending on site.
Other			X			To access hydromobile.

PHOTOS OF TASKS AND WORK ENVIRONMENT

Figure 1: Placing concrete with trowel before laying brick down.



Figure 2: Laying brick down while side flexing trunk, ensuring even and proper placement.

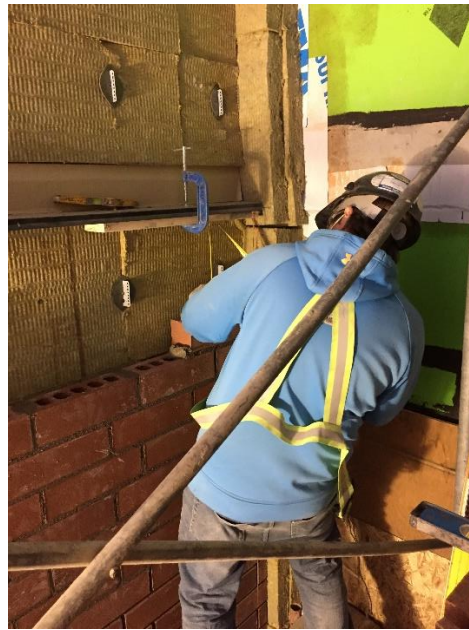
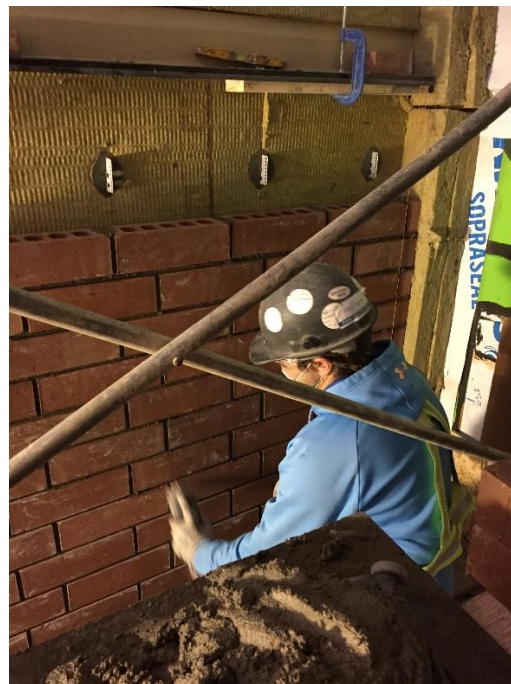


Figure 3: Kneeling while using raker to provide finished look to the bricks. Often completed every 100 bricks laid.



Figure 4: Crouching to use brush on brick in order to remove excess concrete and create clean finish.



Physical Demands Analysis
Job Title: Journeyman Bricklayer
Date Prepared: January 5, 2021
Prepared for: Alberta Construction Association



If you have any questions, and/or would like to discuss this assessment and report further, I can be reached at (780) 429-4761.

Sincerely,

Joanna Taets Von Amerongen, BKin
Kinesiologist



SITE SPECIFIC JOB DEMAND ADDITIONS:

Job Demand	Frequency					Details/Measurements
	N/R	R	O	F	C	
Site Specific Job Demand:						
Vibration			X			Using saw to cut brick (if labourer is unavailable).

Validation Agreement

Job Title:	Journeyman Bricklayer
Data Collection Date:	October 27, 2020

We the undersigned have reviewed the Physical Demands Analysis for this position and agree that the physical demands documented in this report are representative of the true demands of the tasks associated with the job title as assessed on the date listed above.

Completed by:	Joanna Taets Von Amerongen, BKin	Lifemark Clinician Name and Credentials
Approved by:	Bryan Kondo, Superintendent	Management Representative
Approved by:		Worker Representative
Approved by:		Labour Provider Representative